

ABSTRACT OF THE DISCLOSURE

A water treatment and recycling system to provide grey water and crystal clear water to a stone processing system including crystal clear water stone fabrication equipment requiring crystal clear water and grey water stone fabrication equipment capable of using grey water. The system includes a waste water storage tank connected from the waste water discharge ports of the crystal clear water and grey water stone fabrication equipment, a grey water supply loop for pumping waste water from the waste water storage tank as grey water to the grey water stone fabrication equipment and a crystal clear water supply loop for pumping waste water through a high pressure filter to convert the waste water into the crystal clear water, and a crystal clear water supply pump for pumping crystal clear water to crystal clear water stone fabrication equipment. The high pressure filter includes a frame holding a filter stack that includes a manifold plate for connections to the waste water supply and crystal clear water output, a head plate, a plurality of filter plates, and a tail plate with a ram for applying axial pressure along the filter stack. The head plate and each filter plate include an axial input passage for receiving waste water and a plurality of discharge passages to the crystal clear water storage tank. Each of the filter plates further include at least one filter chamber for active filter elements including a filter media and a granular filter layer coated on the filter media.